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Parental Divorce, Attachment, and Self-Other Conceptualization

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Parental Divorce, Attachment, and Self-Other Conceptualization

by

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Each person whose signature appears below certifies that this thesis in his/her opinion is adequate, in scope and quality, as a thesis for the degree Master of Arts.

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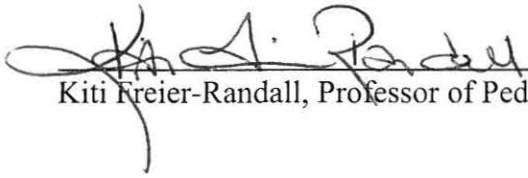

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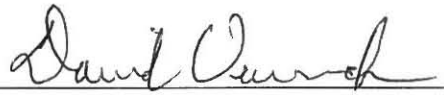

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ABSTRACT OF THE THESIS

Parental Divorce, Attachment, and Self-Other Conceptualization

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The formation of strong attachment bonds in childhood and adolescence has a significant effect on adult self and other concepts operationalized here as self-esteem and hostility. These self-other conceptualizations are posited to facilitate the formation of successful relationships and well being in adulthood. To determine whether parental separations before the age of 16 years disrupt attachment bonds and subsequent self-other conceptualizations, participants from three naturally formed parental marital status groups were compared on attachment, self esteem and hostility: divorced parents (N = 622), married parents (N = 7, 424), or divorced but remarried parents (N = 313). Individuals who had divorced or remarried parents had significantly more insecure parental attachment bonds than those with married parents after controlling for demographics, childhood SES, and parental conflict. Parent marital status did not significantly predict self-esteem or hostility. However, secure attachment did predict higher self-esteem and lower hostility in all groups. Supplementary analyses showed that parental divorce paired with high levels of parental conflict predicted more insecure attachment bond.

Introduction

Healthy emotional development during childhood and adolescence can be influenced by many social, personal, and environmental factors; however, a child's primary caregiver has a crucial influence on social and emotional development (Bowlby, 1977, 1988). A secure attachment style characterized by a stable, supportive environment where help is readily available promotes self-esteem and provides children with a sense of security and trust that they carry into their adult relationships (Brumbaugh & Fraley, 2006, 2007; Collins & Read, 1990; Overbeek, Vollebergh, Engels, & Meeus, 2003). Unfortunately, parental divorce may place a child at risk for impaired attachment bonds and subsequently impaired self development. Because rates of divorce are high, with more than 50% of married individuals divorcing, this is a significant concern (Love & Murdock, 2004). According to the 2005 American census on family structure, the majority of children under the age of 18 did live with both biological parents (68%); however, 28% lived with only one biological parent. Divorce can, in fact, impair or sever parent-child bonds and have significant long-term negative effects on children (Adam & Chase-Lansdale, 2002; Amato & Keith, 1991; Clarke-Stewart, McCartney, Vandell, Owen, & Booth, 2000; Gilman, Kawachi, Fitzmaurice, & Buka, 2003; Kenny, 2000). The present study examines long term effects of parental divorce on attachment related variables in a large, older cohort.

Attachment Theory

For decades, attachment theory research has demonstrated that forming successful attachments in childhood promotes higher quality of life in adulthood as well as an ability

to form successful attachments in adulthood (Bowlby, 1977, 1988). The early foundations of attachment theory focused on the importance of early caregiver experiences and the formation of a "secure base" via the mother or other primary caregiver (Ainsworth, Bell, & Stayton, 1971). This theory posits that through patterns developed from seeking solace via proximity to the attachment figure when threatened, the child begins to form cognitive schemas representing core beliefs about the self and about others that are used throughout life to formulate relationships (Wearden, Peters, Berry, Barrowclough, & Liversidge, 2007). Positive cognitive schemas that form a secure attachment style include self schemas of high self-esteem, mastery, and self efficacy. Secure attachment also includes schemas related to others characterized by feelings of trust, safety, and an ability to rely on others (Fraley, 2002), which lead to success in both romantic and platonic relationships in adulthood (Brumbaugh & Fraley, 2006, 2007; Collins & Read, 1990; Overbeek, Vollebergh, Engels, & Meeus, 2003).

The development of self and other schemas are derived from internal working models of attachment representations (Platts, Tyson, & Mason, 2002). Positive attitudes and experiences leading to cognitive schemas regarding the self and others via a secure attachment develop through consistent responsivity and availability of the attachment figure (typically the parent) to the child. The secure internal working models are then recreated when the individual begins to form new relationships, and foster healthy and satisfying interpersonal relationships across the lifespan (Kobak & Sceery, 1988; Levin, Platt, & Shaver, 1998). Securely attached individuals can successfully negotiate conflicts through utilization of the internal and external sources of support they have learned to safely rely on. Secure attachment style leads to the expectation that one can depend on

others to be available and supportive in times of distress and that one is personally capable of managing distress when faced with challenges (Ainsworth, Blehar, Waters, & Wall, 1978) which ultimately promotes higher self-esteem and more positive attitudes towards others. One's positive psychological well-being can be maintained via a healthy balance between independence and dependence upon others (Beatson & Taryan, 2002; Gilman, Kawachi, Fitzmaurice, & Buka, 2003; Love & Murdock, 2004; Luke, Maio, & Carnelley, 2004; Park, Crocker, & Mickelson, 2004; Scharf, Mayseless, & Kivenson-Baron, 2004).

Definitions of attachment styles. While the literature is generally in agreement as to how parental bonds affect attachment schemas, the measurement of attachment styles varies. Initially attachment styles were defined as secure, anxious, and avoidant in young children (Weinfield, Sroufe, & Egeland, 2000). Secure attachment was characterized by an infant's perception of the primary caregiver as supportive, safe, and available in a strange situation. Insecure attachment was defined as an infant demonstrating an inability to use the primary caregiver or "the secure base" effectively when threatened or distressed. Children with insecure attachments, specifically anxious and avoidant styles, were thought to cope differently with the lack of access to a "secure base" such that the anxious child clung to or was overly dependent on the presence of the primary caregiver while the avoidant child ignored or shunned the primary caregiver rather than engaging for soothing. Later work on clinical samples also added the disorganized style to the list of insecure attachment types. This style was thought to result typically from child abuse or neglect and demonstrates the extreme characteristics from both the anxious and avoidant types. Survey measurement tools as well as

projective tests have been used to classify individuals by attachment style type depending on the age of the individual.

Adult attachment styles have recently been employed to investigate the stability of attachment style from childhood to adulthood. Bartholomew (1990) classified adult attachment into four categories: secure attachment, anxious/preoccupied attachment, avoidant/dismissive attachment and fearful attachment. Secure adult attachment is characterized by a positive view of the self and of others. Securely attached individuals tend to get along well with others and view themselves and others as dependable and non-threatening. As children, these individuals learn positive self and other evaluations based on positive and satisfying interactions with primary caregivers and then transfer this ability to form secure attachments to adult relationships. These individuals tend to engage in healthy social support seeking based on feeling worthy of love in close personal relationships.

The remaining three styles would be considered insecure adult attachment styles. Individuals with anxious/preoccupied attachment often have a strong desire to love and be loved, and tend to ardently pursue unsatisfying and/or ambivalent relationships. They obtain the majority of their self worth from acceptance or rejection by others and therefore are characterized by a negative self-concept and a positive other concept. Individuals classified as having a fearful attachment style display both a negative concept of the self and a negative concept of others. These individuals typically feel that others do not care about them and that, in turn, they are unworthy of anyone's care or affection. They often report having highly authoritarian and often physically and verbally abusive parents who rejected them as children. Individuals displaying avoidant/dismissive

attachment are generally less interested in interpersonal relationships and prefer independence. This particular attachment style is the result of a positive view of the self alongside a negative view of others. The avoidant/dismissive individual is independent and has less interest in obtaining satisfaction through interpersonal interactions. However, it is possible that these individuals display a positive view of the self as a defense against further rejection from others as these individuals often report having parents who were emotionally and physically unavailable and, when present, were harsh and unkind.

Bowlby's early attachment styles focused primarily on the relationship between the mother and the infant, including feeding behaviors, responses to crying, and the extent to which the mother permits the child to cling to her when distressed (Cassidy, 1999). These very basic styles affect important behaviors such as exploration, emotion regulation, and healthy social interaction with other family members and strangers. Bartholomew's adult attachment styles are a continuation of these concepts into adulthood. The basic tenets of early attachment are present, but as the individual ages, the attachment patterns formed in childhood manifest themselves repeatedly in adult relationships via the same cognitive schemas.

Stability of attachment. Most researchers argue that attachment styles are stable throughout the lifespan (Brumbaugh & Fraley, 2007; Collins & Read, 1990; Fraley, 2002; Kobak & Sceery, 1988; Luke, Maio, & Carnelley, 2004; Scharfe & Bartholomew, 1994; Sroufe, 2005; Waters, Weinfield, & Hamilton, 2000). The results of one important meta-analysis assessing attachment stability concluded that early attachment formation had a significant overall influence on adult relationships and that those interactions in

early life strongly affected individual's worldviews via the concepts of the self and the self in relation to others (Fraley, 2002). Brumbaugh and Fraley (2007) found that attachment styles play an important role in filtering information and can significantly influence reactions to new individuals. Specifically, individuals with insecure attachment styles reacted to new others apprehensively while individuals with secure attachment styles reacted to new individuals in a healthy and open-minded way. These findings demonstrate that attachment styles are not simply memories from one's childhood, but that they continue to influence attitudes and beliefs about the self and one's social relationships in any environment. Overall, attachment styles appear to manifest as consistent social and intrapersonal themes across the lifespan.

However, there is also some argument that significant life-events can alter attachment style. Waters, Weinfield, and Hamilton (2000) assert that attachment may be stable in many, but that secure attachment styles can become insecure after significant negative life events. For example, traumatic events can create insecure attachment styles in otherwise securely attached individuals (Weinfield, Sroufe, & Egelund, 2000). The events following the trauma (i.e. personal reactions and/or reactions of others) can significantly alter the effect the trauma has on the individual. For example, maternal depression, and a decrease in family functioning following a trauma or significant negative experience can cause an otherwise securely attached individual to shift toward insecure attachment (Weinfield, Sroufe, & Egelund, 2000). The inability to cope effectively with a trauma via internal resources or external supports may shift belief systems regarding self and others. Sroufe (2005) confirmed the original notion that attachment is stable throughout life, but found attachment was a semi-continuum in

longitudinal data. Initially, the individual is set on a certain path for attachment. Along the way, events occur which either promote that path or shift the individual onto a different path. Thus, Sroufe argued that attachment should be thought of as an aggregate of experiences across the lifespan. However, he did acknowledge that the more set the path becomes over time, the more difficult it can be to change course. In his study, he found that in certain individuals, decline in social support and significant life stress (such as divorce or parental maltreatment) was in fact predictive of a change in attachment style from secure to insecure. These findings, alongside those that show that divorce can significantly impact child well-being provide an important piece of evidence that parental divorce can have a direct effect on attachment. However, the longer the individual has had to develop an attachment pattern, the more resistant that pattern may be to change. Woodward, Fergusson, and Belsky (2000) demonstrated a linear relationship between child's age at divorce and the impairment of the parent-child bond such that younger children demonstrated more insecure attachment following parental divorce. In contrast, Chase-Lansdale, Cherlin, and Kiernan (1995) found that children who were older at the time of parental divorce were more negatively affected and showed more insecure attachment styles than children who were younger. However, the literature in general supports the hypothesis that parental separation at any time in childhood or adolescence can be detrimental to the formation of a secure attachment style. The aim of the current analysis is to demonstrate that experiencing parental divorce prior to age 16 years is detrimental to the parent child bond and to the formation of self and other schemas even in middle and late adulthood.

Attachment and self-other concepts. Empirical evidence for the negative consequences of insecure attachment is based on investigations of the internal working models of attachment relating to schemas of the self and others (Feeney & Noller, 1990; Kobak & Sceery, 1988; Luke, Maio, & Carnelley, 2004; Wearden et al, 2007). These cognitive schemas appear to be the integral factor in understanding how attachment patterns continue to manifest across the lifespan. Luke, Maio, and Carnelley (2004) for example found that individuals with higher self-esteem also have a positive concept of others, and a more secure attachment style (less anxiety and avoidance). Kobak and Sceery (1988) also found that individuals demonstrating secure attachment had more positive perceptions of themselves and others and viewed others as supportive in times of distress. In contrast, individuals with an anxious attachment style, characterized by high levels of role-reversal and "mixed messages" between parent and child, showed significantly higher levels of social anxiety, and perceived others as significantly less reliable and supportive in times of need. These individuals had a negative concept of the self, and were highly invested in others. Individuals with an avoidant attachment style, characterized by reports of parental rejection and less parental love and support, showed higher levels of hostility towards others when in a distressing situation and significantly more negative views of the self. Although the avoidant and anxious groups appeared similar, the avoidant group showed a significantly more negative view of others than the anxious group. Park, Crocker, and Mickelson (2004) found that individuals experiencing parental divorce who were securely attached showed high self-esteem while those who were anxious or fearful had significantly lower self-esteem. Avoidant attachment post parental divorce was related to significantly more negative or even apathetic views of

others, with no significant self-esteem deficit. These findings are theoretically consistent with the attachment literature, demonstrate a clear and direct relationship between attachment style and self-other concepts, and support the premise that insecure attachment styles lead to unhealthy formation of self and other concepts. What is not clear is whether impaired attachment and self-other concepts are an outcome of parental divorce or remarriage. The present study will examine this issue in three parental marital status groups in a large older cohort.

Many researchers study effects of attachment on the formation of self-concept or concepts of others, but not both, and fail to recognize the effects of attachment on one's concept of others in conjunction with the self (Feeney & Noller, 1990; Kobak & Sceery, 1988; Luke, Maio, & Carnelley, 2004; Park, Crocker, and Mickelson, 2004; Wearden et al, 2007). The current study adds to the existing literature by demonstrating that insecure attachment bonds following parental divorce are directly related to impairment in forming both a positive self-concept and a positive and trusting view of others well into adulthood, indicating that parental divorce has a long term effect on psychological adjustment.

Divorce and Attachment

A significant amount of research has investigated the specific effects of parental divorce in childhood. Divorce can create feelings of abandonment and insecurity in children that can extend well into adulthood (Kenny, 2000). A meta-analysis of studies comparing well-being in children of divorce versus children of intact families revealed several common mechanisms by which divorce negatively affects children (Amato &

Keith, 1991). First, the proposed absent parent mechanism assumes it is the mere lack of one parent's presence and not divorce that decreases the amount of love, attention, and supervision the child receives. An absent parent may decrease the number of adult role models and impair social skill development. Research has shown that non-custodial parents (most often fathers) spend less time with their children due to distance and time constraints, therefore, the effects of parental absence are subsequently long term (Hawkins, Amato, & King, 2007; Furstenberg & Nord, 1985). The second proposed mechanism of action post divorce is conflict, such that the environment surrounding divorce determines the child's long term psychological outcomes. The third post-divorce mechanism of action that Amato and Keith present (1991) is financial loss. This mechanism implies that divorce results in the division of assets between parents which may limit the distribution of resources to the children and have subsequent adverse effects. These three mechanisms will be discussed below with regards to their relationship to attachment and self-other conceptualization and the empirical evidence that supports each mechanism.

Mechanisms of Divorce

Parental absence via divorce. Amato and Keith (1991) conducted a meta-analysis of the existing research on divorce and remarriage to determine the presence of any underlying mechanisms by which divorce negatively impacts children. The first mechanism presented was the absent parent mechanism. Here, they argue that the loss of physical proximity to an attachment figure alone can negatively impact the child. Clarke-Stewart, et al (2000) examined these effects by controlling for pre-divorce parental distress and parental relationship conflict and then examining child outcomes in three

groups. Children of divorce were compared with children in single-parent, never married families and children in married families. While children in single parent families fared worse than those in married families, children of divorce had worse cognitive ability, poorer parental interactions and less secure attachment bonds than those of single parent, never married families and married families. Thus parental absence did impair child well-being and increase family conflict, but the divorce or the loss of a pre-existing attachment figure caused more familial and parental conflict and more insecure attachment than having only one parent. These findings indicate that the mere absence of one parent in a household is not detrimental, but that it is the loss of a previously present parent that is detrimental to child well being.

Parental absence via remarriage. One question regarding effects of family relationships that has received little attention is whether the presence of a stepparent after divorce can cancel out the negative effects of the absence of another parent. Amato and Keith's 1991 meta-analysis was one of the most important studies linking divorce and remarriage to negative outcomes in child well-being and adjustment. Amato and Keith conclude that children in stepfamilies were more likely to develop insecure attachment styles than children from intact families or single-parent never married families. Love and Murdock (2004) concur that children raised in stepfamilies showed more insecure attachment than children from intact families. Some have hypothesized that the remarriage of a divorced parent can cause significant stress in the child and further impair attachment formation. Freisthler, Svare, and Harrison-Jay (2003) found that children in stepfamilies experienced significant emotional stress and feelings of loss associated with their parent's remarriage. Additionally, the experience of having two separate families

(one with biological mother and one with biological father) and witnessing a parent's courting behavior can both cause significant distress (Cherlin, 1992; Emery, 1998; Stoll, Arnaut, Fromme, & Felker-Thayer, 2005). Based on findings that remarriage can cause significant impairment in well-being and attachment, the current investigation will determine whether individuals raised in stepfamilies fare worse or better than individuals raised in divorced or intact families.

The empirical evidence to date indicates likely negative effects of divorce on attachment formations, but few studies consider the possibility that remarriage may either have stronger effects on attachment style in children or act as a buffer against the parental absence by divorce. However, there is no evidence to date indicating that remarriage buffers the damage of biological parental absence.

Parental conflict. High parental conflict often precedes divorce and can significantly affect how the child reacts to the divorce (Amato & Keith, 1991). Many, for instance, argue that the family environment preceding the separation actually causes the primary damage of divorce not the divorce itself. This may occur because mothers tend to experience distress due to marital conflict and often become depressed and anxious during and after a divorce; this in turn negatively affects children (Clarke-Stewart & Hayward, 1996). The majority of studies comparing conflict in divorced and intact families have demonstrated that high conflict, intact families were more detrimental to child well-being than low-conflict divorced families indicating that the mere presence of parental conflict can be detrimental. However, marriages that end in divorce are indeed often characterized by significant amounts of conflict (Amato & Hohmann-Marriott, 2007) which may be an underlying causal factor in negative outcomes following divorce.

In addition, Gilman, Kawachi, Fitzmaurice, and Buka (2003) found that divorce remained a significant predictor of decline in well-being after controlling for both socioeconomic status and parental conflict. As such, it is posited here that the disruption and conflict between the child's primary attachment figures is a significant disruption for the child, but the loss of a parental relationship has a stronger influence on well-being.

The aforementioned studies were important in demonstrating that breaks in attachment bond following divorce have significant negative effects on children beyond that of the environmental stressors often surrounding divorce (e.g., financial losses and conflict), yet more information is needed regarding the manner by which these negative effects carry over into adulthood. The current investigation will test whether the negative effects of divorce do carry over into adulthood above and beyond the temporary environmental disruptions that surrounded the parent's divorce and how conflict and financial contexts relate to these divorce effects on attachment related outcomes.

Aside from focusing on the permanent effects of a negative pre- and post-divorce environment, research has also shown that positive parental relationships buffer the effects of divorce on children. In a sample of disadvantaged African American adolescent girls who had experienced parental separation, Adam and Chase-Lansdale (2002) found that parental divorce predicted higher levels of hostility and depression as well as lower self-esteem compared to those with married parents. However, those in the divorce group who reported a better maternal relationship, higher familial support, and a positive interpretation of their situation, showed better psychological adjustment than the other children in the divorce group. In fact, they were similar to the married group. Therefore, when the secure base was strong, as facilitated by highly positive interactions

with the mother and other family members, the loss of one parent from the home was not detrimental.

The relationship with the remaining attachment figure may play a significant role in determining the impact of divorce on a child. Kenny (2000) concurs that negative effects of divorce are lessened if the child has a positive relationship with at least one divorced parent regardless of the gender of the parent. Wearden et al. (2007) found that individuals experiencing parental divorce who reported having one or both parents who were warm and responsive had more positive concepts of self and others than those reporting having one or both parents who were inconsistent and/or unresponsive. Thus far, the literature has shown that an individual need only one secure parental attachment to weather the storm of divorce; however, the majority of the literature has only focused on the importance of the maternal relationship (Paquette, 2004). The current study combines both maternal and paternal parent-child bonds to determine attachment security.

Overall, parental conflict or parental support surrounding divorce can significantly affect the child's experience, and in turn, determine the impact of the divorce on the child's attachment bonds and beliefs about the self and others (Amato & Keith, 1991; Kenny, 2000; Clarke-Stewart et al, 2000; Adam & Chase-Lansdale, 2002; Gilman, Kawachi, Fitzmaurice, & Buka, 2003). However, the break in attachment bonds caused by the divorce does appear to be the strongest predictor of negative outcomes. If a child perceives during the parental divorce process that a parent is emotionally and/or physically unavailable, the child may fear that basic needs will not be met and conclude that he or she is not worthy of love and needed support. Experiencing this type of

distress while the child is still forming self concepts and world view of others may have lasting consequences. In the current investigation, parental conflict will be used to predict attachment and self-other concepts to determine the extent that the divorce impacts these outcomes beyond the environment or by interacting with it. Then, the direct effects of divorce alone will be tested after controlling for parental conflict on attachment and self-other concepts. It is expected that divorce will be the strongest predictor of attachment and self-other concepts.

Financial loss. A third mechanism of divorce posited by Amato and Keith (1991) is that the socioeconomic difficulty that often accompanies divorce causes negative child outcomes. The majority of studies show that divorced families have significantly lower socioeconomic status (SES) than intact families; however, even after controlling for SES, the effects of divorce are often significant (Adam & Chase-Lansdale, 2002). Clarke-Stewart et al. (2000) found that parental separation predicted negative child outcomes after controlling for income and parental education although SES did also predict outcomes. Gilman et al. (2003) also found that individuals who experienced parental divorce in childhood were at significantly higher risk of developing depression in adulthood after controlling for childhood SES and that higher childhood SES buffered negative divorce outcomes. Studies have shown that divorce is often related to socioeconomic struggles and that this inability to meet basic needs can have significant effects on children of divorce (Adam & Chase-Lansdale, 2002; McLanahan & Teitler, 1999). The current study will assess the effects of parental conflict and childhood socioeconomic status along with parental marital status to predict attachment outcomes in

middle and late adulthood. Then, conflict and childhood SES will be controlled to determine the effect of divorce alone on attachment and self-other conceptualizations.

Summary

Overall, environmental factors may significantly influence the effects of divorce on children's well-being. However, the divorce itself may cause a break in attachment formation which then impairs the formation of positive self and other concepts. There is evidence that the detrimental effects of divorce are independent of conflict and SES though these characteristics may exacerbate the impact of the separation. As the current sample is larger than most in the attachment and divorce literatures, controlling for such demographics will be an important method of determining whether divorce is in fact a significant independent predictor of impaired attachment and self-other concepts. As Bowlby and many others have demonstrated, the tangible "secure base" established in early childhood evolves into an internal working model of oneself in relation to others to affect daily functioning in adulthood. Thus far, identifying attachment style has been the most effective method for explaining the negative outcomes associated with divorce and parental separation and the development of one's concept of the self and of others. With evidence that divorce impairs attachment formation and psychological well-being across the lifespan, it is important to explore the specific underlying mechanisms that determine the impact of parental separation across the lifespan. Many studies have investigated the effects of divorce on attachment and made the connection between certain attachment styles and negative psychological outcomes; however, few have fully explained the long term psychological consequences of parental separation in childhood and adolescence.

Therefore, the aim of this investigation is to describe the family environment surrounding divorce, the divorce itself, and the long term effects that follow.

Hypotheses

The aim of the current study is to determine whether disturbances in parental attachment, via parental divorce, have a significant effect on the concept of the self and others as measured by self-esteem and hostility.

Hypothesis I. It is posited that parental separation in childhood before age 16 years via divorce inhibits secure attachment formation necessary for emotional development. Therefore, individuals who have experienced the divorce of a parent before the age of 16 will score lower on attachment than individuals who were raised in intact and remarried families, indicating deficits in secure attachment formation. It is estimated that these effects will remain significant after controlling for related demographics such as age, ethnicity, gender, parental education, parental conflict, and childhood SES.

Hypothesis II. In turn, the disruption in attachment formation will negatively affect the formation of the concepts of self (e.g. self-esteem) and others (e.g. hostility). Individuals who have experienced parental separation and who score more than one standard deviation below the mean on attachment (i.e., insecure attachment) will score significantly lower on self-esteem and higher on hostility than those who are one standard deviation or higher from the mean on attachment (i.e., secure attachment).

Hypothesis III. It is estimated that self-esteem and hostility levels may partially mediate the relationship between parent marital status and attachment security. Based on Baron and Kenny's (1986) mediation test, it is estimated that: a) parent marital status will

predict attachment security, b) parent marital status will predict self-esteem in one model and hostility in a second model, c) self-esteem and hostility will both predict attachment security, d) when controlling for the effects of self-esteem and then hostility, the relationship between parent marital status and attachment will be reduced to non-significance. If the first three criteria are met, but the relationship between divorce and attachment remains significant after controlling for self-esteem and hostility, but is lessened, a partial mediation model will be supported. If this mediation is not supported, self-esteem and hostility will be tested as possible moderators of the parent marital status and attachment relationship.

Hypothesis IV. Because conflict and socioeconomic status are both significant predictors of attachment security, self-esteem, and hostility, they also will be tested to determine the presence of any mediating or moderating effect on the relationship between parent marital status and attachment security.

Method

Participants

Participants for the current investigation were a subset of individuals from the Biopsychosocial Religion and Health Study (BRHS), a substudy of the 96,000 person Adventist Health Study-2 cohort investigation of cancer and lifestyle (Butler et al., 2007) in North America. BRHS mailed a random sample of 20,000 AHS-2 participants a 20-page questionnaire addressing religious, stress, and health-related variables and up to three reminders (Lee et al., 2008) between September of 2006 and August of 2007for a return of 10,988 useable surveys. For the current investigation, participants were included in the study based on an item regarding parental marital status before the age of 16 and who they lived with while growing up from the AHS-2 survey in 2004 to form three groups: divorced parents (N = 622), married parents (N = 7, 424), or divorced but remarried parent (N = 313) (see Table 1 for Inclusion/Exclusion criteria). After applying inclusion and exclusion criteria, the final study sample for analysis included 8,359 participants.

Table 1

Inclusion/exclusion criteria for parental marital status groups

AHS-2 Question	Parental Marital Status			
Were you raised with	Excluded	Intact	Divorced	Remarried
two birth parents		X		
two parents, but one or both were not your birth parent				X
a female birthparent only			X	
a male birthparent only			X	
other: specify	X			
If no, why didn't you live with your two birth parents?		N/A		
mother died	X			
father died	X			
parents separated/divorced			X	X
parents never lived together	X			
you were adopted	X			
you went to boarding school	X			
you grew up in foster care	X			
you left home before age 16 years	X			
other: specify	X			

Measures

Attachment. To estimate the effects of attachment on the concept of the self and others, attachment was assessed with the Ryff parent-child bond scale (Ryff, Singer, & Palmersheim, 2004, see Appendix A). Four items assessed maternal bond, four items assessed paternal bond, 3 items assessed maternal abuse/discipline, and 3 items assessed paternal abuse/discipline. These questions were asked about "your childhood and early adolescence" (age 5-15); and participants were asked to describe "the mother/woman and

the father/man who raised you". The items were rated on a 4-point Likert scale. The bond items were coded so that a higher score indicates a more positive relationship. The abuse/discipline items were reverse coded so that a higher score indicated less parental abuse. A composite scale adding maternal and paternal bond and maternal and paternal abuse variables was created to measure overall parent-child attachment bond (Ryff, Singer, & Palmersheim, 2004). The resulting 14-item scale yielded a reliability coefficient of .89 in the current study. Other studies have used similar items to demonstrate that attachment enhances mental and physical health outcomes (Ryff, Singer, & Palmersheim, 2004) and interpersonal trust (An & Cooney, 2006). The scale questions were based on Rossi's (2001) measure of family of origin characteristics (i.e. parental affection and discipline) which impact a child's ability to grow into a well-rounded, socially responsible adult. This attachment score was used in the first analysis to compare parent marital status groups on attachment. For the remaining analyses, standardized scores $\geq$ -0.99 placed participants in the securely attached group and scores $<$ -1 placed participants in the insecurely attached group.

Self conceptualization. Self-esteem was measured using a short four item form of the Rosenberg Self-Esteem Scale which is a measure of global self-esteem rated on a Likert scale from one (strongly disagree) to seven (strongly agree;see Appendix B) to indicate the degree each item was true of them. The validity and reliability of this scale has been well established for use in psychological research and is a widely used measure of self-esteem within the framework of attachment (Park, Crocker, & Mickelson, 2004; Luke, Maio, & Carnelley, 2004). The scale has been used across many different cultures and demonstrates reliability (Crandall, 1973) and validity by correlating appropriately

with other measures of self-esteem and personality traits (Demo, 1985; Schmitt & Allik, 2005). The reliability index for the current study was .77.

Conceptualization of others. To determine the effects of separation and attachment formation on concept of others, Hostility was measured using the Cook-Medley Hostility Scale (Strong, Kahler, Greene, et al., 2005;see Appendix C). Participants were asked to rate the items on a four point Likert scale based on the degree to which they believed each statement was true or false about them (definitely false to definitely true). The scale demonstrates construct validity by significantly correlating with other measures of hostility (Contrada & Jussim, 1992) though some have argued that it is multi- rather than uni-dimensional (Steinberg & Jorgensen, 1992). The Cook-Medley Hostility Scale has been shown to be reliable with an alpha of .79 with a true/false response scale (Strong et al., 2005). In the current study, the reliability of the hostility scale was .87 with a 4-point Likert rating scale.

Demographic controls. Age, ethnicity (Black or White), gender, and parental education were controlled for in each analysis based on strong correlations between demographic factors and outcomes. Parental education was measured using highest maternal education completed and highest paternal education completed via a 9-point scale from grade school to doctoral degree completion. If individuals reported values for both parents, the mean of the two was used as a total parental education variable. If education for one parent was not reported, the value reported for the other parent was used.

Parental conflict. Based on previous literature, parental conflict was considered an important variable and was addressed using one item which required participants to

rate the frequency of "quarreling, arguing, or shouting between your parents" between the ages of 5 and 15 on a 5-point Likert scale (seldom or never to very often). This item was taken from the Taylor et al. (2004) Risky Family Scale.

Childhood socioeconomic status. Childhood-Adolescent socioeconomic status was addressed by asking participants to indicate "on average, how difficult was it for your family to meet expenses for basic needs like food, clothing, and housing when you were under 18" on a five point Likert scale ranging from "seldom or never" to "very often." This item was developed by Pudrovska et al. (2005) to assess economic hardship early in life.

Results

Data Screening

All variables were screened for normality, linearity, outliers, and missing data. No outliers more than 4.5 standard deviations from the mean were identified. Due to the large sample size, the significance value for each analysis was set at .001. Missing data was addressed by calculating a mean of available items if two or fewer items were missing from the scale items. For example, the hostility scale consisted of nine items; therefore, an individual could miss two or fewer of the 9 scale items; a mean of available items would then be used as the scale score, else the case was missing this scale score. A total of 849 individuals were missing 10% or more scale items and were deleted from further analyses; this resulted in a total of 10,192 participants for analyses. However, application of inclusion/exclusion criteria regarding parental marital status resulted in a total of 8,359 participants available for analysis.

Table 2 shows descriptive statistics for the variables of interest in the current investigation. Parent-Child Bond was somewhat negatively skewed (skew = -0.76) with an insignificant level of kurtosis (0.242). Self-esteem was negatively skewed (skew = -1.12) and leptokurtic (1.001) indicating that the majority of participants reported relatively high levels of self-esteem. However, this resembles the likely response of the general population. Hostility was normally distributed (skew = -0.001, kurtosis = 0.112).

Table 2

Descriptive Statistics for Variables of Interest

	Mean	SD	Min	Max	Skew	Kurtosis
Parent-Child Bond	44.85	8.04	14	56	-0.76	0.242
Self-Esteem	5.66	1.24	1	7	-1.14	1.001
Hostility	2.18	0.51	1	4	-0.001	0.112

Characteristics of Participants

Demographic information for the sample is provided in Table 3. The mean age of participants was 60 years; most participants were White (65%) and female (67%). The mean parental education for the sample was a high school diploma. The majority of participants had more than a high school education (77%). About a quarter of participants reported having no difficulty meeting basic expenses (26%), 59.9% reported moderate levels of difficulty, and 14% reported that meeting basic expenses was very difficult. Most participants reported low to moderate levels of parental conflict growing up (82%).

Table 3

Demographics

	Mean	SD	Min	Max	Skew	Kurtosis
Age	60.29	13.43	23	106	0.13	-0.65
Parental Education	3.31	2.05	1	9	0.78	-0.34
Participant Education	5.79	1.99	1	9	-0.39	-0.66
	N	%				
Gender						
Male	3,310	33%				
Female	6,727	67%				
Ethnicity						
Black	3,367	35.2%				
White	6,195	64.8%				
Difficulty Meeting Expenses Before Age 18						
Not At All	2,660	26.1%				
A Little	2,239	22%				
Somewhat	2,207	21.7%				
Fairly	1,502	14.8%				
Very	1,552	15.3%				
Parental Conflict						
Seldom/Never	4,280	42%				
Once in While	2,614	25.6%				
Occasionally	1,489	14.6%				
Often	1,104	10.8%				
Very Often	682	6.7%				

The demographics were compared across parent marital status groups to determine necessary covariates for further analyses (see Table 4). Chi Square analysis indicated there was no gender difference by marital status group $\chi^2 = 3.48, p > .05$. However, a chi square demonstrated that there were significantly more Blacks in the divorced parent and remarried parent groups and more Whites in the married group $\chi^2 = 253.6, p < .001$. As such, ethnicity will be controlled for in all analyses.

Table 4

Demographics by Parent Marital Status

	Mean (SD)			
	Parent Married	Parent Divorced	Parent Remarried	Sig
Age	61.35 (13.54)	56.66 (13.69)	58.96 (13.13)	< 0.001
Parental Education	3.37 (2.10)	3.24 (1.83)	3.35 (2.07)	n.s.
Participant Education	5.90 (1.97)	5.69 (1.86)	5.19 (2.03)	<0.001
	N (%)			
	Parent Married	Parent Divorced	Parent Remarried	Sig
Gender				n.s.
Male	2,512 (34.5%)	187 (30.8%)	104 (33.7%)	
Female	4,775 (65.5%)	421 (69.2%)	205 (66.3%)	
Ethnicity				< .001
Black	1,895 (27.2%)	336 (58%)	112 (37%)	
White	5,065 (72.2%)	243 (42%)	191 (63%)	
Difficulty Meeting Expenses before age 18				< .001
Not at all	2,026 (27.4%)	91 (14.7%)	77 (24.7%)	
A little	1,722 (23.3%)	96 (15.5%)	58 (18.6%)	
Somewhat	1,583 (21.4%)	147 (23.8%)	83 (26.6%)	
Fairly	1,067 (14.4%)	121 (19.6%)	49 (15.7%)	
Very	999 (13.5%)	163 (26.4%)	45 (14.4%)	
Parental Conflict				< .001
Seldom/Never	3,132 (42.3%)	260 (42.2%)	69 (22%)	
Once in While	1,979 (26.7%)	105 (17%)	76 (24.3%)	
Occasionally	1,093 (14.8%)	98 (15.9%)	55 (17.6%)	
Often	758 (10.2%)	84 (13.6%)	74 (23.6%)	
Very Often	445 (6.0%)	69 (11.2%)	39 (12.5%)	

An ANOVA indicated a significant age difference by parental marital status group $F(2, 8248) = 37.374$, $p < .001$. Post hoc Bonferoni analyses revealed that participants in the parent married group were significantly older than those in either the parent divorced or parent remarried groups, however, participants in the parent remarried

group were significantly older than those in the parent divorced group ($M_{married} = 61.34$, $M_{divorced} = 56.66$, $M_{remarried}$, 58.96). An ANOVA on parental education by parental marital status group revealed no significant difference on education by group. As such, age will be controlled for in further analyses. Although parental education did not differ by parent marital status groups, it was positively correlated with gender, parent-child bond, and self-esteem and negatively correlated with parental conflict, childhood SES, and hostility (see Table 5). Therefore, parental education will also be controlled for in further analyses.

Analysis of the parental conflict variable revealed significant differences across marital status groups $\chi^2 = 145.72$, $p < .001$. As anticipated, there was significantly less parental conflict in the parent married group and the remarried group than the divorced group. Another covariate tested was the variable measuring difficulty meeting basic expenses before the age of 18 (childhood SES). Results showed a significant difference across marital status groups $F(2, 8{,}326) = 62.57$, $p < 0.001$ revealing that participants in the divorced parent group reported lower childhood SES than those in the married parent group. There was no significant difference between the married and remarried parent groups (see Table 4). As such, parental conflict and SES during childhood will be employed as covariates in all further analyses.

Correlations. Bivariate correlations were run between variables of interest and demographic variables (see Table 5). As anticipated, attachment was positively correlated with self-esteem and negatively correlated with hostility. Higher hostility was significantly correlated with lower parent-child bond and lower self-esteem. Lower

Table 5

Bivariate correlations for all variables of interest

	Parental Marital Status	Age	Ethnicity	Parental Education	Gender	Parental Conflict	Childhood SES	Parent-Child Bond	Self-Esteem
Age	**-0.08								
Ethnicity	**0.13	**-0.21							
Parental Education	-0.02	**-0.30	**-0.19						
Gender	-0.01	**0.06	**-0.10	**0.04					
Parental Conflict	**0.11	**-0.16	-0.02	**-0.04	**-0.08				
Childhood SES	**0.08	**0.14	-0.01	**-0.25	*-0.02	**0.16			
Parent-Child Bond	**-0.23	**0.13	**-0.08	**0.13	**0.11	**-0.45	**-0.21		
Self-Esteem	**-0.04	**0.03	**0.11	**0.03	**0.07	**-0.12	**-0.09	**0.19	
Hostility	**0.06	**-0.08	**0.24	**-0.09	**0.07	**0.07	**0.09	**-0.13	**-0.17

Note. $*p < 0.05$, $**p < 0.01$

childhood SES was significantly correlated with lower parent-child attachment bond, lower self-esteem, higher hostility, and parental conflict.

Main Analyses

Hypothesis I. An ANCOVA was performed to compare parent marital status groups on levels of parent-child bond after controlling for age, gender, ethnicity, parental education, parental conflict, and childhood SES. There were significant parent marital status group differences on overall parent-child bond $F(2, 6834) = 122.35$, $p < 0.001$, $\eta^2 = 0.035$. The parent-married group reported significantly more secure parent-child bond (Mean = 45.89, SD = 7.71) than both the parent-divorced (Mean = 39.62, SD = 7.58) and parent-remarried groups (Mean = 39.64, SD = 8.66). The difference between the parent-divorced and parent-remarried groups was not significant.

Hypothesis II. To test hypothesis two, individuals were assigned an attachment group based on scores of parent-child bond as described in the methods section and a 3 (divorced, remarried, married) x 2 (secure, insecure) nested MANCOVA was performed using parent marital status and attachment style to predict self-esteem and hostility while controlling for age, gender, ethnicity, parental education, parental conflict, and childhood SES. There was no main effect of parental marital status on self-esteem or hostility. However, there was a significant main effect of attachment on self-esteem and hostility Wilks' $\lambda = 11.79$, $p < .001$, $\eta^2 = 0.04$. Post hoc tests using the Bonferoni method of comparison revealed that securely attached individuals showed significantly higher self-esteem than insecurely attached individuals. Those classified as securely attached also showed significantly lower levels of hostility than those classified as insecurely attached (see Table 6).

Table 6

Multivariate analysis of covariance results with attachment and parent marital status predicting self-esteem and hostility

	Mean	SE	F	*df*	*p*	η^2
Self-Esteem						
Attachment*			20.44	1, 6346	< 0.001	0.003
Secure Attachment	5.64	0.04				
Insecure Attachment	5.31	0.06				
Parent Marital Status			1.39	2, 6346	n.s.	0
Married	5.51	0.03				
Divorced	5.54	0.07				
Remarried	5.37	0.08				
Hostility						
Attachment*			7.50	1, 6346	< 0.01	0.001
Secure Attachment	2.16	0.02				
Insecure Attachment	2.24	0.02				
Parent Marital Status			0.67	1, 6346	n.s.	0
Married	2.2	0.01				
Divorced	2.17	0.03				
Remarried	2.22	0.03				

Hypothesis III. The third hypothesis was tested using Baron and Kenny's (1986) mediation and moderation plan for analysis. To test for mediation, four criteria must be met. First, the independent variable must significantly relate to the dependent variable. Second, the mediator must significantly relate to the dependent variable. Third, the independent variable must significantly relate to the mediator. Finally, when the mediator is controlled in the analysis after entering the independent variable to predict the dependent variable, the relationship between the independent and dependent variable must be reduced significantly as tested with the Sobel test.

To create the independent variables of interest here, parent marital status was dummy coded to examine the differences between the divorced and married parent groups as well as the differences between the remarried and married parent groups. A series of hierarchical regressions were run to examine possible mediators of the relationship between parent marital status and attachment including self-esteem, hostility, childhood SES and parental conflict. These regressions were run first comparing those with married or divorced parents and then comparing those with married or remarried parents.

Self-esteem mediation and moderation. Table 7 shows the results of the mediation and moderation tests. First, upon controlling for age, gender, ethnicity, parental education, parental conflict, and childhood SES, parental divorce significantly predicted attachment ($\beta = -0.13, p < 0.001$). Second, when compared with those with married parents, parental divorce ($\beta = -0.01, p > 0.05$) did not significantly predict self-esteem. Third, self esteem significantly predicted attachment ($\beta = 0.13, p < 0.001$). In the final regression model, upon controlling for self-esteem, parental divorce remained a significant predictor of attachment. Therefore, self-esteem did not mediate the relationship; parental divorce and self esteem both had only direct effects on attachment bond. A hierarchical regression was run to determine whether self-esteem acted as a moderator between parental divorce and attachment. No significant interaction was found between parental divorce and self esteem to predict attachment.

After controls, parent remarriage significantly predicted attachment ($\beta = -0.09, p < 0.001$). Second, parental remarriage ($\beta = -0.02, p < 0.05$) did not significantly predict self-esteem. Third, self esteem significantly predicted attachment ($\beta = 0.13, p < 0.001$).

Finally, after controlling for self-esteem, remarriage remained a significant predictor of attachment ($\beta = -0.09$ $p < 0.01$) though the strength of the relationship was reduced. Sobel's test was not significant indicating that self-esteem was not a mediator of the parental remarriage and attachment relationship (Sobel's test = -0.3, $p = 0.6$). Therefore, there were again only direct effects of parent remarriage and self esteem on attachment. A hierarchical regression was run to determine whether self-esteem acted as a moderator between parental divorce and attachment. No significant interaction was found between parental remarriage and self-esteem to predict attachment.

Table 7
Attachment regressed on sociodemographic variables, parent marital status, and self-esteem

	Attachment$_1$ Divorced/Married			Attachment$_1$ Remarried/Married		
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Independent Variables						
Age	0.10*	0.10*	0.09*	0.11*	0.10*	0.10*
Gender	0.06*	0.05*	0.05*	0.06*	0.05*	0.05*
Ethnicity	n.s.	-0.04*	n.s.	n.s.	-0.04*	n.s.
Parental Education	0.11*	0.10*	0.10*	0.10*	0.10*	0.10*
Parental Conflict	-0.43*	-0.41*	-0.42*	-0.43*	-0.41*	-0.41*
Childhood SES	-0.12*	-0.12*	-0.10*	-0.13*	-0.12*	-0.12*
Divorced vs Married Parents	-0.13*	-0.13*	-0.13*			
Remarried vs Married Parents				-0.09*	-0.09*	-0.09*
Self Esteem		0.13*	0.13*		0.13*	0.13*
Self Esteem x Div/Married			n.s.			
Esteem x Remarried/Married						n.s.
Total R^2	0.29*	0.27*	0.30*	0.28*	0.27*	0.54*

* $p < .001$
$_1$Marital status was regressed onto self-esteem but the relationship was not significant.

Hostility mediation and moderation. Table 8 shows the mediation/moderation models for hostility. First, upon controlling for age, gender, ethnicity, parental education, parental conflict, and childhood SES, parental divorce significantly predicted attachment ($\beta = -0.13, p < 0.001$). Second, parental divorce did not significantly predict hostility ($\beta = 0.01, p <$ n.s.). Hostility did, however, significantly predict attachment ($\beta = -0.07, p < 0.001$). Lastly, after controlling for hostility, parental divorce remained a significant predictor of attachment ($\beta = -0.13, p < 0.001$). Therefore, hostility did not mediate the relationship between parental divorce and attachment; parental divorce and hostility had only direct effects on attachment. A hierarchical regression was run to determine whether hostility acted as a moderator between parental divorce and attachment. No significant interaction was found between parental divorce and hostility to predict attachment.

After controls, parental remarriage significantly predicted attachment ($\beta = -0.09, p < 0.001$). Second, parental remarriage did not predict hostility ($\beta = 0.01, p < 0.001$). Third, hostility significantly predicted attachment ($\beta = -0.074, p < 0.001$). Lastly, after controlling for hostility, parental remarriage remained a significant predictor of attachment ($\beta = -0.09, p < 0.001$). Therefore, hostility did not mediate the relationship between parental remarriage and attachment; instead remarriage and hostility had direct effects on attachment. A hierarchical regression was run to determine whether hostility acted as a moderator for this relationship. No significant interaction was found between parental remarriage and hostility to predict attachment.

Table 8
Attachment regressed on sociodemographic variables, parent marital status, and hostility

	Attachment[1] Divorced/Married			Attachment[1] Remarried/Married		
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Independent Variables						
Age	0.10*	0.12*	0.10*	0.11*	0.11*	0.11*
Gender	0.06*	0.07*	0.07*	0.06*	0.07*	0.06*
Ethnicity	n.s.	n.s.	0.04*	n.s.	n.s.	n.s.
Parental Education	0.11*	0.10*	0.10*	0.10*	0.10*	0.10*
Parental Conflict	-0.43*	-0.41*	-0.42*	-0.43*	-0.41*	-0.42*
Childhood SES	-0.11*	-0.13*	-0.11*	-0.13*	-0.13*	-0.12*
Divorced vs Married Parents	-0.13*	-0.13*	-0.13*			
Remarried vs Married Parents				-0.09*	-0.09*	-0.09*
Hostility		-0.07*	-0.08*		-0.07*	-0.08*
Hostility x Div/Married			n.s.			
Hostility x Remarried/Married						n.s.
Total R^2	0.29*	0.26*	0.29*	0.28*	0.26*	0.28*

* $p < .001$
[1]Marital status was regressed onto hostility but the relationship was not significant.

Hypothesis IV.

Parental conflict mediation and moderation. Previous literature as well as current regression analyses shows that parental conflict significantly affects outcomes after parental divorce. Therefore, parental conflict mediation and moderation of the parent marital status and attachment relationship was explored (see Table 9). First, parental divorce significantly predicted attachment ($\beta = -0.13, p < 0.001$). Second, parental divorce significantly predicted parental conflict ($\beta = 0.32, p < 0.001$). Third,

parental conflict significantly predicted attachment ($\beta = -0.42, p < 0.001$). Fourth, after controlling for parental conflict, parental divorce remained a significant predictor of attachment ($\beta = 0.14, p < 0.001$) indicating no parental conflict mediation of the parental divorce and attachment relationship. A hierarchical regression was run to determine whether conflict moderated the relationship between parental divorce and attachment. There were significant direct effects for both parental conflict ($\beta = -0.42, p < 0.001$) and parental divorce ($\beta = -0.14, p < 0.001$). A significant interaction was shown between parental conflict and parental divorce in predicting attachment security ($\beta = 0.05, p < 0.001$). Specifically, higher conflict paired with parental divorce predicted less secure attachment.

Parental remarriage significantly predicted attachment ($\beta = -0.09, p < 0.001$). Third, parental remarriage predicted higher levels of parental conflict ($\beta = 0.09, p < 0.001$). Finally, the relationship between remarriage and attachment was actually enhanced when parental conflict was controlled for ($\beta = -0.10, p < 0.001$) indicating that parental conflict does not mediate the relationship between parental remarriage and attachment. A hierarchical regression was run to determine whether parental conflict moderates the relationship between parental remarriage and attachment. There were significant direct effects for both parental conflict ($\beta = -0.42, p < 0.001$) and parental remarriage ($\beta = -0.10, p < 0.001$) in predicting attachment. However, the interaction between parental conflict and parental remarriage did not significantly predict attachment security ($\beta = -0.001, p > 0.05$).

Table 9

Attachment regressed on sociodemographic variables, parent marital status, and parental conflict

	Attachment$_1$ Divorced/Married			Attachment$_1$ Remarried/Married		
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Independent Variables						
Age	0.10*	0.11*	0.10*	0.11*	0.11*	0.11*
Gender	0.06*	0.06*	0.06*	0.06*	0.06*	0.06*
Ethnicity	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Parental Education	0.11*	0.11*	0.11*	0.10*	0.11*	0.10*
Childhood SES	-0.11*	-0.13*	-0.11*	-0.13*	-0.13*	-0.13*
Divorced vs Married Parents	-0.14*	-0.14*	-0.14*			
Remarried vs Married Parents				-0.10*	-0.10*	-0.10*
Parental Conflict		-0.42*	-0.43*		-0.42*	-0.43*
Conflict x Div/Married			0.05*			
Conflict x Remarried/Married						n.s.
Total R^2	0.29*	0.26*	0.29*	0.28*	0.26*	0.28*

*$p < 0.001$

$_1$Parent marital status significantly predicted parental conflict.

Childhood SES mediation and moderation. Previous literature as well as the current regression analyses indicate that childhood Socioeconomic Status affects outcomes after parental divorce. As such childhood SES which significantly predicted attachment in the present study was explored as a possible mediator or moderator of parental marital status effects (see Table 10). Divorce significantly predicted attachment ($\beta = -0.13, p < 0.001$) and childhood SES ($\beta = -0.12, p < 0.001$), and SES significantly predicted attachment ($\beta = -0.13, p > 0.001$). However, in the fourth step of the mediation test, the relationship between parental divorce and attachment was enhanced after controlling for SES indicating no mediation effect. A hierarchical regression was run to

examine whether childhood SES moderated the relationship between parental divorce and attachment. There were significant direct effects for both childhood SES ($\beta = -0.11, p < 0.001$) and parental divorce ($\beta = -0.14, p < 0.001$) on attachment. However, the interaction between childhood SES and parental divorce was not significant at the 0.001 level.

Parental remarriage significantly predicted attachment ($\beta = -0.09, p < 0.001$), but there was no significant relationship between parental remarriage and childhood SES ($\beta = 0.01, p = > 0.05$). Third, childhood SES significantly predicted attachment ($\beta = -0.13, p < 0.001$). Finally, after controlling for childhood SES, the relationship between parental remarriage and attachment remained significant ($\beta = -0.14, p < 0.001$); childhood SES did not mediate the relationship between parental remarriage and attachment. A hierarchical regression was run to determine whether childhood SES moderated the relationship between parental remarriage and attachment. There were significant direct effects for both childhood SES ($\beta = -0.11, p < 0.001$) and parental remarriage ($\beta = -0.10, p < 0.001$). However, the interaction between parental conflict and parental remarriage did not significantly predict attachment security ($\beta = -0.002, p > 0.05$).

Table 10

Attachment regressed on sociodemographic variables, parent marital status, and childhood SES

	Attachment[1] Divorced/Married			Attachment[1] Remarried/Married		
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Independent Variables						
Age	0.10*	0.11*	0.10*	0.11*	0.11*	0.10*
Gender	0.06*	0.05*	0.06*	0.06*	0.05*	0.06*
Ethnicity	n.s.	n.s.	n.s.	n.s.	n.s.	n.s.
Parental Education	0.11*	0.11*	0.11*	0.10*	0.11*	0.11*
Parental Conflict	-0.43*	-0.43*	-0.42*	-0.43*	-0.43*	-0.42*
Divorced vs Married parents	-0.13*	0.12*	-0.14*			
Remarried vs Married Parents				-0.09*	-0.09*	-0.10*
Childhood SES		-0.13*	-0.11*		-0.13*	-0.11*
SES x Div/Married			n.s.			
SES x Remarried/Married						n.s.
Total R^2	0.29*	0.27*	0.29*	0.28*	0.27*	0.29*

*$p < 0.001$

[1]Parent marital status significantly predicted childhood SES, $p < 0.001$.

Discussion

As divorce becomes more common in our society, it is important to understand the effects it has on families and their children's development. Through understanding the mechanisms by which divorce negatively impacts children, new interventions can be developed to facilitate improved outcomes. The current study focused on how divorce affects attachment security and the development of a healthy concept of the self and of others. As attachment has been found to be fairly stable throughout the lifespan and affect both interpersonal and intrapersonal functioning, understanding the specific mechanisms by which this effect takes place is crucial.

Summary of Findings

The most important finding in the current investigation was that parental conflict significantly mediated the relationship between parental divorce and attachment. Higher levels of parental conflict were related to more insecure attachment in participants whose parents divorced before the age of 16. Overall, attachment was more secure in those whose parents remained married; those who had experienced parental divorce and to a lesser extent those who experienced parental remarriage before age 16 years had less secure parental attachment bonds. This relationship was significant even after controlling for age, gender, ethnicity, level of parental education, childhood socioeconomic status, and levels of parental conflict between ages 5 and 15 years. Those with divorced parents and those with remarried parents showed similar attachment patterns indicating that divorce and remarriage may be similarly detrimental to the parent-child attachment bond. Much literature has linked divorce to negative effects in children and young adults

(Amato & Keith, 1999). The present study indicates these effects may continue across the lifespan. As the majority of participants in the current study were over age 50, and that parental divorce effects are still evident supports the notion that effects of parental divorce are long lasting and in this study are exacerbated by parental conflict.

In addition, the adult children demonstrated a strong relationship between attachment, self esteem and hostility. Specifically, regardless of parent marital status, less secure attachment predicted lower self-esteem and higher hostility than those with more secure attachment. These findings confirm previous literature asserting that concepts of the self and of others are primary mechanisms by which the attachment style is formed (Feeney & Noller, 1990; Kobak & Sceery, 1988; Luke, Maio, & Carnelley, 2004; Wearden et al, 2007). In conjunction with the research on attachment stability, the current study shows that one's attachment style continues to influence self and other perceptions in adulthood (Sroufe, 2005). Contrary to the study hypothesis however, and though parental marital status predicted attachment bond, parental marital status was not related to self esteem or hostility. In this sample of middle aged and older adults, it is likely that many other intervening life events have impacted their impressions of self and other beyond parental attachment bond. In fact, their attachment bond to other significant individuals was not assessed and this more recent relationship could greatly affect self and other perceptions. Also, there was minimal variability within the parental bonding variable which may lessen the ability to successfully discriminate amongst the parent marital status groups.

Self-esteem was tested as a possible mediator between the parent marital status and attachment relationship, but had no impact on the relationship. The current findings

suggest that parental divorce and parental remarriage may influence psychological processes through entirely different dynamics. The effect of parental remarriage on self-esteem may be explained by the single parent's shift of attention from the child to the possible new spouse, which may alter the child's self perceptions and attachment security.

Parental divorce and remarriage were also posited to affect hostility levels. However, no effects were found. Previous findings linked parental divorce and remarriage to impaired attachment bonds, and impaired attachment bonds to poor self-esteem and high levels of hostility. However, when organized according to the theoretical framework, the chronology of the relationships did not hold. These findings would indicate that the effects are present, but that other positive life events may have softened the negative effects of divorce. As the population sampled for the current study is a religious one, spirituality and religious practices and beliefs may buffer the stressors associated with divorce.

Because the literature indicated that conflict and childhood socioeconomic status may be possible mediators of the parental divorce and child outcome relationships, and because both parental conflict and childhood SES were significant control variables in regression analyses, both were explored further. Parental conflict was presented in the literature as having a significant impact on both the child and parent's experience of the divorce. As anticipated, those with divorced or remarried parents reported higher levels of parental conflict. Higher levels of parental conflict were also strongly related to more insecure attachment bonds. Examining these two variables together revealed that when parental divorce is accompanied by high levels of parental conflict, attachment bonds are

more severely impaired. High levels of parental conflict surrounding the divorce may lead the child to self blame and distress that disrupts secure attachment processes. To develop an insecure attachment style, one must experience a caregiver who is inconsistent, ambivalent, or even abusive; this leads the child to believe they are unworthy of love and attention and that others are unsafe and unreliable. High levels of parental conflict may parallel this experience and impair the attachment bond. It is important to note that the conflict may have occurred at a time independent of the divorce or may have been related to other issues; however, the strong interaction between parental divorce and parental conflict indicates that the two are related.

The divorce literature also indicates that one mechanism of negative parental divorce effects on children is the loss of financial stability. Such a change in socioeconomic status often accompanies divorce and explains the negative impact of the divorce. Controlling for SES actually strengthened the relationship between parent marital status and attachment, indicating that divorce was a stronger predictor of attachment impairment.

Implications of Findings

In general, findings show that in divorced families, when the environment surrounding the divorce is chaotic (i.e. conflict and lack of ability to meet basic needs), the individual is at significant risk for forming an insecure attachment style which may impact adult functioning. The degree of chaos surrounding divorce can significantly increase the impact the divorce has on the child. Even though other relationships and interactions may repair the damage somewhat, the current study shows that parental divorce and the experiences that often co-occur with divorce do significantly impair

attachment bonds. These attachment bonds, in turn, continue to influence the individual's perceptions of the self and others across the lifespan.

Limitations

Findings of the current study provide an important window into the ways that divorce may affect a child well into adulthood. However, self-reported accounts of childhood experiences may or may not have been skewed or clouded by events occurring between childhood and adulthood. Therefore, generalizing findings should be approached with caution.

The effects found in the current study were modest; however, given the length of time since the parental divorce and the present assessment of self and other perceptions, this likely means the effects of parental divorce were much more dramatic during childhood and adolescence. Because SDA religious doctrine is based in an evangelical protestant denomination, until recently, divorced church members, especially if one committed adultery, may be dropped from congregational membership. This likely created much confusion and difficulty for children of divorcing parents in this older cohort. It is also possible that this contributed to the conflict in the environment surrounding the divorce.

There are some certain selection biases in the current cohort as well. Individuals in the parent divorce group were significantly younger than those in the married parent group. It is possible that divorce became more acceptable in society and in this church denomination in more recent years. This sample bias is important to note even though age was controlled for in all analyses. Another general limitation is that participants in the remarried parent group could have been responding to parental attachment questions

in reference to either a biological parent or a step-parent. No distinction was made in the survey instructions. Therefore, the specific attachment figure that each individual reported on was inconsistent. In addition, it is only known that the divorce or remarriage occurred before the age of 16 years, more specific age of divorce was not available for analysis. In addition, the attachment measure was limited to indicating levels of secure attachment vs. insecure attachment. Anxious or avoidant styles could not be delineated. If the specific attachment styles could be further defined, other findings may become apparent regarding self and other perceptions. For example, in relation to attachment theory, anxiously attached individuals could demonstrate more specific self-other impairments than the individuals with an avoidant attachment style. By collapsing across these four styles of attachment, important data may have been lost.

Future Directions

As mentioned above, the current investigation was conducted via a retrospective analysis of childhood events. Therefore, some accounts may be unreliable. Researchers investigating long-term effects of divorce on attachment and self-other concepts would benefit greatly from the use of longitudinal research tracking a specific cohort of individuals over time.

Refining the methods by which these effects are studied would also significantly improve the quality of the research. Specifically, the use of a standardized measure of attachment examining all four attachment styles could tease out more specific differences amongst individuals who experience parental divorce. The current study found significant differences between individuals with secure and insecure attachment styles, but much more information could be found within the category of insecure attachment.

Refining the parent marital status variables would also improve the literature in this area as well. As family structures change in our society, it is important to account for all of the differences in both the structure and the quality of relationships amongst individuals within the family unit.

Finally, future research should examine other possible environmental mechanisms of divorce in order to fully understand the specific changes individuals facing divorce may experience. As parental conflict was a strong determinant of the relationship between parental divorce and attachment, it is important that future research further investigate the dynamics and qualities of conflict that are in fact so detrimental. For example, determining the impact of who initiates the conflict, the type of conflict witnessed, the level of engagement of the child in the conflict, and the duration of the conflict offer alternative directions for future research.

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Appendix A

Attachment Measure

These are questions about your **childhood and early adolescence (age 5-15).**	Not at all	A little	Some	A lot
Describe the **mother/woman** who raised you:				
1. How much did she understand your problems and worries?	O	O	O	O
2. How much could you confide in her about things that were bothering you?	O	O	O	O
3. How much love and affection did she give you?	O	O	O	O
4. How much time and attention did she give you when you needed it?	O	O	O	O
Describe the **father/man** who raised you:				
5. How much did he understand your problems and worries?	O	O	O	O
6. How much could you confide in him about things that were bothering you?	O	O	O	O
7. How much love and affection did he give you?	O	O	O	O
8. How much time and attention did he give you when you needed it?	O	O	O	O

Appendix B

Self-Esteem

Listed below are a number of statements concerning personal attitudes and traits. Read each item and decide whether the statement is True or False as it pertains to you personally. Some of the items are very similar—by intention—so your answers can be compared to people in other studies who are answering the same questions.	Not true			Somewhat true			Very True
	↓			↓			↓
1. I take a positive attitude toward myself.	O	O	O	O	O	O	O
2. On the whole I am satisfied with myself.	O	O	O	O	O	O	O
3. I certainly feel useless at times.	O	O	O	O	O	O	O
4. At times I think I am no good at all.	O	O	O	O	O	O	O

Appendix C

Hostility

For each statement please indicate whether it is true or false for you.		Definitely false	Tends to be false	Tends to be true	Definitely true
52.	I have often had to take orders from someone who did not know as much as I did.	O	O	O	O
53.	It takes a lot of argument to convince most people of the truth.	O	O	O	O
54.	Most people are honest chiefly because they are afraid of being caught.	O	O	O	O
55.	Most people will use somewhat unfair means to gain profit or an advantage rather than to lose it.	O	O	O	O
56.	It makes me impatient to have people ask advice or interrupt me when I work on something important.	O	O	O	O
57.	Most people make friends because friends are likely to be useful to them.	O	O	O	O
58.	Most people inwardly dislike putting themselves out to help other people.	O	O	O	O
59.	I have often found people jealous of my good ideas because they had not thought of them first.	O	O	O	O
60.	A large number of people are guilty of bad sexual conduct.	O	O	O	O